## Remarks by

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## Panel on

"Engineering Space Commercialization"

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Adelphi, Maryland March 20, 2007 Thank you for asking me to be part of this panel. It's a pleasure to be with you.

Today I want to tell you a little about the Office of Commercial Space Transportation, what we do and how we do it. Then I thought I'd give you some idea of what I think commercial space brings to the table when it comes to the nation's overall space effort.

The Office of Commercial Space Transportation was created in 1984 and we've been part of the FAA since 1995. We regulate commercial space transportation. We're the only office in the U.S. government that does that.

We license commercial space launch and re-entry operations, not the vehicles, the launches. We also license the operation of non-federal launch sites and we have six of those so far, from one in Alaska, to two in California to one each in Oklahoma, Florida and Virginia. Work is underway for other states interested in seizing upon the opportunity for space commerce.

We do all that by statute and, over the years, we have licensed the launch of more than 180 vehicles without loss of life or significant damage to property. As Congress has directed, we're in the safety business helping to protect the uninvolved public. Unlike the rest of the FAA, Congress also directed us to encourage, facilitate and promote commercial space.

So that's a snapshot of the Office of Commercial Space Transportation.

But like those enchanted photographs you see in the Harry Potter movies where the subjects never stand still, our snapshot is always changing.

And that's certainly the case in the world of commercial space transportation. Things are changing.

While the commercial space world is, as it has been, a world of commercial satellites and expendable launch vehicles, we are now working with a sizeable number of new developers ranging from the COTS winners SpaceX and RocketplaneKistler, to the Space Ship Company, Bigelow Aerospace, Armadillo, Blue Origin, Benson Space and others.

Things are changing in the space environment generally. NASA is changing. The policy environment is always evolving. Every election plays a role, whether in Congress or the White House.

And public perception is changing. Since the 2004 flights of SpaceShipOne, private human space flight has become a legitimate ambition, something that's actually possible.

So what does that mean for the future of commercial space and what does it mean for the overall space effort in the United States?

About a week ago Mike Griffin published an article that included commentary on the future of commercial space. He wrote that he expected the role of commercial space in human space exploration ... *exploration* ... to be significant, and possibly transforming, over the next five decades and beyond.

I see it the same way. Certainly commercial space will do every*thing* it can to help in any *way* it can to extend the reach of exploration.

In fact, the commercial mandate is to grow and to serve. The President's Vision for Space Exploration directs the pursuit of "commercial opportunities for providing transportation and other services supporting the International Space Station and exploration missions beyond low Earth orbit."

The Aldridge Commission Report that followed said this: "Commercialization of space should become a primary focus of the vision. NASA should procure all of its low-Earth orbit launch services competitively on the commercial market."

We are preparing to do exactly that. Let me tell you how.

We are doing it, in part, through our regulatory mandate. The Commercial space Launch Amendments Act of 2004, Congress directed that we develop regulations governing private human space flight. Last December, we issued regulations for crew and space flight participants (passengers). Those regulations are based on informed consent. Passengers must be told of the risk involved. Here are the facts. You decide. We're

also working right now on final regulations for experimental flight permits for testing those reusable launch vehicles.

We're doing it by helping to bring together entrepreneurial developers of reusable launch vehicles to meet with the Air Force to examine common interests and possibilities. Last April, we held the first ever summit between those parties. This April we're doing it again.

After years of hard work with the Air Force, The FAA has issued a final rule on common safety standards for ranges across the country. Those common safety standards will also apply to FAA licensed launch sites. We've also issued a final rule on safety approvals.

We're working with NASA on the Lunar Lander Challenge and COTS. The FAA will license the COTS launches.

Beyond that, we've had six permitted launches since the end of last October involving Armadillo and Blue Origin.

During the first two months of this year, we met on average, with one new launch vehicle developer a week interested in getting into the commercial space business.

And all this has happened since last August.

It's been two and half years, now, since SpaceShipOne flew. While the skies have been quiet, the shops have been busy and I expect a notable increase in testing this year. Before the decade ends, about the time that the Space Shuttle stops flying, I expect regular commercial human space flights to begin. And in the years that follow, I expect the number of flights to grow dramatically.

The timing couldn't be better for America's space effort. NASA is in transition between programs and vehicles, while commercial space is branching into new areas, keeping space in the public eye and on the public's mind.

Commercial space and NASA reinforce complementary national commitments to a greater reach for the nation's space effort, exploration

from NASA, public participation through private enterprise from the commercial sector.

It's not a fusion of interests but a partnership built on the excellence of both sectors. Commercial space transportation is a proven go-to transportation system making us a vital ally of all those who see our future in a robust space effort.

Commercial space transportation will evolve into <u>the</u> sector that safely meets the current and future needs of our partners both civil and military. The highways of the sky and beyond are producing new intersections of capability, capabilities that could make America, indisputably and emphatically, the pace setter, the innovator for anyone who talks about space commercialization.

Commercial space is on the move.

Thank you very much.